REMARKS

Rejection of Claims Under 35 U.S.C. 112, Second Paragraph

The Examiner has rejected Claims 1-10 under 35 U.S.C. 112, second paragraph, on the asserted basis that the claims are indefinite. In particular, the Examiner contends that, with regard to Claim 1, the phrase "the corresponding female conductive connection element on the electrically isolated plug" lacks antecedent basis; that the next line "a connection end of an electrically isolated plug" is not clear because it is not clear if it is part of the plug just noted where "an plug" indicates it is a new plug; and that it is not clear to what "said plug" refers since there are at least two introduced.

Applicants have amended Claim 1 to correct the asserted lack of antecedent basis and to clarify the reference to the plug. No change of scope is intended by these changes. It is respectfully submitted that the foregoing amendments overcome the Examiner's rejections on the basis of indefiniteness and it is respectfully requested that these rejections be withdrawn.

Rejection of Claims Under 35 U.S.C. 102(b)

The Examiner has rejected Claim 1 and various of its dependent Claims 3-10 under 35 U.S.C. 102(b) as being assertedly anticipated by U.S. Patent No. 4,791,272 ("Thaler"), Japan Patent Application No. JP362,174,581 A ("Yamakwa"), German Patent Application No. DE 3311811A ("Hirtz"), British Patent Application No. GB 2199,451 A ("Claasen") and U.S. Patent No. 6,665,783 ("Cooper"), for the asserted reasons stated in the Office Action.

Applicants have amended Claim 1 to recite that the socket is "in a side" of the body and that it further includes "a capacitor disposed on the same side of said body as said socket." As amended, Claim 1 clearly distinguishes over Thaler, Yamakawa, Hirtz, Claasen and Cooper, none of which disclose a capacitor on the same said of the body as the socket for the female conductive connector.

Thaler discloses a heatable hair roller having a PTC heating element. The roller in Thaler has no capacitor nor is there any purpose for including a capacitor in a hair roller.

Yamakawa discloses a housing 11 for an overload protecting device, and a housing 14 housing a starting relay including a PTC relay. No capacitor is disclosed. Even if the overload protecting device in box 11 included a capacitor (which is not disclosed), the box 11 is on the opposite side of the box 14 including the PTC device, rather than on "the same side" of the body as the socket, as defined in Claim 1.

Hirtz discloses an electrically heated mask including a PTC element. No capacitor is disclosed nor is there a reason for including one.

Claassen discloses a heated electrical cable including a PTC element. Claassen discloses no capacitor nor does it suggest any reason for including one.

Cooper discloses an electrical connector including a variable resistance to reduce arcing. Cooper also discloses no capacitor nor any reason for including one.

Accordingly, Claims 1, and 3-7 and 9-10 are not anticipated by Thaler, Yamakawa, Claassen and/or Cooper and it is therefore respectfully submitted that the 35 U.S.C. 102(b) rejections of Claims 1 and 5, as amended, be withdrawn.

Rejection of Claims Under 35 U.S.C. 103(a)

Claims 1-5 and 10 have been rejected under 35 U.S.C. § 103(a) as being assertedly unpatentable over Cooper. In particular, the Examiner contends that Cooper discloses the claimed invention except for welding and that it would have been obvious to employ welding as a method to join electrical parts. Applicant respectfully does not agree that substitution of welding for soldering is obvious for joining electrical parts, in view of the potential difficulties occasioned by the need to melt localized portions of the underlying substrates for welding, which is not the case for soldering. Accordingly, such a substitution would not have been obvious. Furthermore, as pointed out above, Cooper neither discloses nor suggests use of a capacitor anywhere, and certainly not a capacitor disposed on the same side of the body including the positive temperature coefficient resistor as the socket. Accordingly, it is respectfully submitted that withdrawal of the rejection of Claim 8 under 35 U.S.C. 103(a) over Copper is in order and such is courteously requested.

Claim 1 has been rejected under 35 U.S.C. § 103(a) as being assertedly unpatentable over U.S. Patent No. 3,914,727 ("Fabricus") in view of U.S. Patent No. 6,132,233 ("Fukuda"). The Examiner contends that Fabricus discloses the claimed invention at Fig. 5 except the plug with the female terminals and contends that Fukuda discloses female plug 17 at Fig. 1A for connecting and locking to a male part.

With due respect to the Examiner, the hypothetical combination proposed by the Examiner would not yield or suggest the invention defined by Claim 1 nor would the proposed hypothetical combination have been obvious. Fabricus simply discloses a positive temperature coefficient of resistor package having exposed male connectors 21,

22, 57 and 58 extending from a body 20 and a metal heat sink 60. Fukuda discloses an interlocking wired electrical connector having a stopper protrusion 17 on a cantilevered lock arm 15. In contrast to Fukuda, where the protrusion is on a cantilevered arm, in the present invention, the engagement member is on the body of the positive coefficient of resistance device including the positive coefficient of resistance resistor. Accordingly, even if the hypothetical combination proposed by the Examiner were made, it would not yield or suggest the invention defined by Claim 1. Furthermore, Fukuda discloses no "positive temperature coefficient of resistance resistor" nor any motivation for including one. Still further, neither Fabricus nor Fukuda disclose or suggest including a "capacitor," as specifically recited in Claim 1, nor is there any suggestion or motivation in either of Fabricus or Fukuda for including one. Accordingly, it is respectfully submitted that the present invention defined by Claim 1 would not have been rendered obvious by Fabricus in view of Fukuda.

The Examiner has rejected Claims 1 and 7-10 as being assertedly unpatentable under 35 U.S.C. 103(a) over United States Patent No. 5,949,324 ("Segler") in view of Fukuda. With respect to Claim 1, the Examiner contends that Segler discloses the claimed invention at Fig. 3 except for the plug with female terminals and contends that Fukuda discloses female plug 17 at Fig. 1A for connecting and locking to a male part.

With due respect to the Examiner, the hypothetical combination proposed by the Examiner would not yield or suggest the invention defined by Claim 1 nor would the proposed hypothetical combination have been obvious. Segler simply discloses a temperature probe package including a thermister, which could be either a negative or positive temperature coefficient of resistor. As discussed above, Fukuda discloses an

interlocking wired electrical connector having a stopper protrusion 17 on a cantilevered lock arm 15. In contrast to Fukuda, however, where the protrusion is on a cantilevered arm, in the present invention, the engagement member is on the body of the positive coefficient of resistance device including the positive coefficient of resistance resistor. Accordingly, even if the hypothetical combination proposed by the Examiner were made, it would not yield or suggest the invention defined by Claim 1. Furthermore, Fukuda discloses no "positive temperature coefficient of resistance resistor" nor any motivation for including one. Still further, neither Segler nor Fukuda disclose or suggest including a "capacitor," as specifically recited in Claim 1, nor is there any suggestion or motivation in either of Segler or Fukuda for including one. Accordingly, it is respectfully submitted that the present invention defined by Claim 1 would not have been rendered obvious by Segler in view of Fukuda.

As to Claims 7-10, Applicants respectfully point that the "welding, soldering, and other attachment means" disclosed in Segler relate only to soldering or welding a thermal probe to electrical circuitry. There is, however, no disclosure in Segler of use of such a technique in securing male conductive terminals to a plate in a positive temperature coefficient of resistance current limiting assembly, as defined in Claim 7-10 of the present application. In addition, Claims 7-10 are dependent upon Claim 1 and are submitted to be patentable for all of the reasons stated above with respect to Claim 1.

The Examiner has rejected Claim 2 under 35 U.S.C. 103(a) as assertedly being unpatentable over Fabricus in view of Fukuda, and further in view of Applicant's admitted prior art. In particular, the Examiner contends that the invention is disclosed by

the combination of Fukuda and Fabricus except for the capacitor and that addition of the capacitor would have been obvious in view of Applicant's admitted prior art.

With due respect to the Examiner, the hypothetical combination proposed would not yield or suggest the invention defined by Claim 2 nor would the proposed hypothetical combination have been obvious. As discussed above, Fabricus simply discloses a positive temperature coefficient of resistor package having exposed male connectors 21, 22, 57 and 58 extending from a body 20 and a metal heat sink 60. Fukuda discloses an interlocking wired electrical connector having a stopper protrusion 17 on a cantilevered lock arm 15. Although Applicant's admitted prior art does includes a capacitor, the hindsight reconstruction proposed by the Examiner could not be accomplished without using Applicant's disclosure as a guide. Furthermore, Fukuda discloses no "positive temperature coefficient of resistance resistor" nor any motivation for including one. In any event, as discussed above, Fukuda's protrusion is on a cantilevered arm, whereas in the present invention, the engagement member is on the body of the positive coefficient of resistance device including the positive coefficient of resistance resistor. Accordingly, even if the hypothetical combination proposed by the Examiner were made, it would not yield or suggest the invention defined by Claim 2.

In view of the foregoing, it is respectfully submitted that none of the prior art references cited by the Examiner teach or suggest a positive temperature coefficient of resistance current limiting assembly having the features defined in Claims 1-10. Since Claims 1-10 are now believed to be in condition for allowance, it is respectfully requested that a Notice of Allowance issue for pending Claims 1-10.

Applicant does not believe that any fees are due; however, in the event that any fees are due, the Commissioner is hereby authorized to charge any required fees due (other than issue fees), and to credit any overpayment made, in connection with the filing of this paper to Deposit Account No. 50-0605 of CARR LLP.

Should the Examiner have any questions or desire clarification of any sort, or deem that any further amendment is desirable to place this application in condition for allowance, the Examiner is invited to telephone the undersigned at the number listed below.

Respectfully submitted,

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